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REMARKS

This Amendment is in response to the Advisory Action of December 18, 2001 and the Office Action of September 20, 2001.

With this Amendment, the amendment to the specification at page 16, line 1 which was filed on August 27, 2001 is deleted. In its place, a copy of claims 1-20 as originally filed September 21, 1998. It is believed that this Amendment will address the Examiner's statement in the Advisory Action that the amendment on page 16, that, "does not 'simply restate the claims as originally filed'." It is believed that entry of this amendment is proper.

In view of the above amendments, reconsideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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MARKED-UP VERSION OF REPLACEMENT PARAGRAPHS

Replacement paragraph for the paragraph beginning at Page 16, Line 1:

~~A slider for supporting transducer elements for a data storage system includes a rigid member having opposed leading and trailing edges and opposed upper and lower surfaces. The lower surface includes a raised bearing and a trailing edge surface being adapted to support a transducer element. Landing pads extends from the raised bearing and are adapted to define a contact interface with a disc surface. At least one pressure relief trenches formed in the raised bearing proximate to a contact interface between the trailing edge of the slider and disc surface. The trench is sized to reduce capillary pressure of the meniscus along the disc surface. The slider can include a center rail and the center rail includes a pressure relief trench. The slider can include a transversely aligned pressure relief trench which may be opened at opposed ends thereof to form a through channel. The slider can include a longitudinally aligned pressure relief trench, a sloped pressure relief trench, and a plurality of spaced pressure relief trenches. The slider can include opposed side rails and the side rails include a pressure relief trench. The trench can include a depth dimension sized so that separation of the slider and disc at the trench during contact of the slider with the disc surface is equal to or greater than $2R_e$ to balance capillary pressure and disjoining pressure of a lubricant fluid on the disc surface. The trench can be sized to provide a slider-disc interface in the toe-dipping regime. A slider for supporting transducer elements for a data storage system includes a rigid member having opposed leading and trailing edges and opposed upper and lower surfaces. The lower surface includes raised bearing surfaces and the trailing edge is adapted to support a transducer element. Landing pads extend from a bearing surface and are~~

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~~adapted to define a contact interface with a disc surface. Pressure relief means proximate a contact interface position between the trailing edge of the slider and disc surface to reduces capillary pressure of the meniscus to limit area of the meniscus.~~

1. A slider for supporting transducer elements for a data storage system comprising:

a rigid member including opposed leading and trailing edges and opposed upper and lower surfaces, the lower surface including a raised bearing, a trailing edge surface being adapted to support a transducer element;

landing pads extending from the raised bearing and adapted to define a contact interface with a disc surface; and

at least one pressure relief trench formed in the raised bearing proximate to a contact interface position between the trailing edge of the slider and disc surface, the trench being sized to reduce capillary pressure of the meniscus along the disc surface.

2. The slider of claim 1 wherein the slider includes a center rail and the center rail includes a pressure relief trench.

3. The slider of claim 1 including a transversely aligned pressure relief trench.

4. The slider of claim 3 wherein the transversely aligned pressure relief trench is opened at opposed ends thereof to form a through channel.

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5. The slider of claim 1 including a longitudinally aligned pressure relief trench.

6. The slider of claim 1 including a sloped pressure relief trench.

7. The slider of claim 1 wherein the slider includes a plurality of spaced pressure relief trenches.

8. The slider of claim 1 wherein the slider includes opposed side rails and the side rails include a pressure relief trench.

9. The slider of claim 5 wherein the longitudinally aligned pressure relief trench includes an opened end.

10. The slider of claim 1 wherein the trench includes a depth dimension sized so that separation of the slider and disc at the trench during contact of the slider with the disc surface is equal to or greater than $2R_e$ to balance capillary pressure and disjoining pressure of a lubricant fluid on the disc surface.

11. The slider of claim 1 wherein the trench is sized to provide a slider-disc interface in the toe-dipping regime.

12. A slider for supporting transducer elements for a data storage system comprising:

a rigid member including opposed leading and trailing edges and opposed upper and lower surfaces, the lower surface including raised bearing surfaces, the trailing edge being adapted to support a transducer element;

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landing pads extending from a bearing surface and adapted to define a contact interface with a disc surface; and
pressure relief means proximate to a contact interface position between the trailing edge of the slider and disc surface to reduce capillary pressure of the meniscus to limit area of the meniscus.

13. The slider of claim 12 wherein the pressure relief means includes at least one trench formed in a bearing surface and extending below a bearing surface.

14. The slider of claim 12 wherein the trench includes a depth dimension sized so that separation of the slider and disc at the trench during contact of the slider with the disc surface is equal to or greater than $2R_e$ to balance capillary pressure and disjoining pressure of a lubricant fluid on the disc surface.

15. The slider of claim 12 wherein the trench is sized to provide a slider-disc interface in the toe-dipping regime.

16. The slider of claim 12 including a transversely aligned trench.

17. The slider of claim 12 including a longitudinally aligned trench.

18. The slider of claim 12 including a sloped trench.

19. The slider of claim 12 wherein the slider includes opposed side rails and the side rails include a trench.

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20. The slider of claim 12 wherein the slider includes a center rail and the center rail includes a trench.